

Personal Details

Last Name: Lagendijk
First Name: Ad
Date of Birth: 18-11-1947
Place of Birth: Zwanenburg (Haarlemmermeer, The Netherlands)

Education

1954 - 1960 Openbare School 10, Badhoevedorp
1960 - 1965 Haarlemmermeer Lyceum, Badhoevedorp
1965 - 1968 Bachelor chemistry, University of Amsterdam (UvA)
1968 - 1970 Master Physical Chemistry, UvA
1970 - 1973 PhD student Laboratory for Physical Chemistry of the UvA

Academic degrees

1968 Bachelor chemistry, University of Amsterdam (UvA)
1970 Master (doctoraal, with distinction) physical chemistry, UvA
1974 PhD, physical chemistry, UvA

PhD thesis

Title: An ESR study of induced defects in SrTiO_3
Advisor: J. D. W. van Voorst
Date: May 1974

Employment history

Regular

1968 - 1970 Practical course assistant, UvA
1970 - 1973 Faculty member (3-year contract), Lab. for Physical Chemistry, UvA
1973 - 1975 Postdoc Universitaire Instelling Antwerpen (UIA), Wilrijk, Belgium
1975 - 1980 Tenured faculty member UIA
1980 - 1984 Tenured faculty member Natuurkundig Laboratorium UvA
1984 - 2012 Professor of physics at UvA
1987 - 1997 Head Department of Atomic Physics FOM-Instituut AMOLF, Amsterdam
2001 - Professor of physics at University of Twente
2006 - 2012 Group leader Photon Scattering at FOM Institute AMOLF
2012 - Emeritus University Professor UvA

Visiting scientist, visiting professor

1974 Summer period at Argonne National Laboratory, Chicago, Illinois, USA
1979 Summer at UCLA, invited by Prof. Ray Orbach
1980 Six month period visiting group of Prof. Isaac F. Silvera at the Natuurkundig Laboratorium, UvA
2007 Visiting Professor École Normale Supérieure in Paris (Lab. Pierre Aigrain)
2014 Visiting professor Institut Langevin, ParisTech in Paris

Honors

- 1991 Physics Lezing prize (most important physics prize in The Netherlands)
- 1995 Harvard Loeb lecturer
- 1996 - Distinguished University Professor of the UvA (only five are appointed)
- 1997 - Fellow of the American physical Society (APS)
- 1998 - Member of Royal Dutch Academy of Sciences (KNAW)
- 2002 NWO Spinoza prize (most important science prize in The Netherlands)
- 2007 - Fellow European Optical Society (EOS)

Quantity

Number of papers: ~300
Number of citations: 23247
h-index: 73

Numbers obtained from Google Scholar.

More info: [Public Google Scholar profile of Ad Lagendijk](#)

More info: adlagendijk.com (with list of all publications)

More info: [website of group](#)

Key papers

1. D.S. Wiersma, P. Bartolini, A. Lagendijk, and R. Righini, *Localization of light in a disordered medium*, Nature **390**, 671 (1997)
2. H. De Raedt, A. Lagendijk, and P. de Vries, *Transverse localization of light*, Phys. Rev. Lett. **62**, 47 (1989)
3. M.P. van Albada and A. Lagendijk, *Observation of weak localization of light in a random medium*, Physical Rev. Lett. **55**, 2692 (1985)
4. S.B. Hasan, A.P. Mosk, W.L. Vos, and A. Lagendijk, *Finite-size scaling of the density of states in photonic band gap crystals*, Phys. Rev. Lett. **120**, 237402: 1-6 (2018)
5. A.P. Mosk, A. Lagendijk, G. Lerosey, and M. Fink, *Controlling waves in space and time for imaging and focusing in complex media*, Nature Photon. **6**, 283 (2012)
6. A. Lagendijk, B. van Tiggelen, and D.S. Wiersma, *Fifty years of Anderson localization*, Phys. Today **62**, 24 (2009)
7. A. Lagendijk and B.A. van Tiggelen, *Resonant multiple scattering of light*, Physics Rep. **270**, 143 (1996)
8. M.P. van Albada, B.A. van Tiggelen, A. Lagendijk, and A. Tip, *Speed of propagation of classical waves in strongly scattering media*, Phys. Rev. Lett. **66**, 3132 (1991)
9. P. de Vries, D.V. van Coevorden, and A. Lagendijk, *Point scatterers for classical waves*, Rev. Mod. Phys. **70**, 447 (1998)

Advised theses

(UvA means University of Amsterdam and UT means University of Twente)

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| 1 | Defendant: R. van Kemp |
| | Title: Magnetic resonance studies of the oxygen-vacancy complex and interstitial chromium in silicon |
| | co-advisor: C. A. J. Ammerlaan |

- Date of defense: June 30, 1988, Amsterdam UvA.
- 2 Defendant: M. P. van Exter
Title: Ultra-fast spectroscopy of vibrational excitations and surface plasmons
Date of defense: September 29, 1988, Amsterdam, UvA
- 3 Defendant: M. J. H. Baggen
Title: Vibrational dynamics of molecular dense phases at high pressures
Date of defense: May 29, 1989, Amsterdam, UvA
- 4 Defendant: J. W. J. Verschuur
Title: Ionization and dissociation of NO and H₂ in strong radiation fields
co-advisor: H.B. van Linden van den Heuvell
Date of defense: May 31, 1989, UvA, Amsterdam
- 5 Defendant: M. Pont
Title: The behavior of atomic hydrogen in superintense, high frequency laser fields
co-advisor: M. Gavrilă
Date of defense: February 28, 1990, Amsterdam, UvA.
- 6 Defendant: P. de Vries
Title: Trottering through quantum physics
co-advisor: H. de Raedt
Date of defense: May 7, 1991, Amsterdam, UvA
- 7 Defendant: M. B. van der Mark
Title: Propagation of light in disordered media: a search for Anderson localization
Date of defense: June 14, 1990, Amsterdam, UvA.
- 8 Defendant: H. J. Bakker
Title: Time-resolved vibrational spectroscopy with picosecond infrared pulses
Date of defense: October 1, 1991, Amsterdam, UvA.
- 9 Defendant: P. C. M. Planken
Title: Generation and application of ultrashort infrared pulses
Date of defense: October 2, 1991, Amsterdam, UvA.
- 10 Defendant: R. H. M. Groeneveld

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| | Title: | Femtosecond spectroscopy on electrons and phonons in noble metals |
| | co-advisor: | co-advisor: R. Sprik |
| | Date of defense: | June 3, 1992, Amsterdam, UvA. |
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| 11 | Defendant: | B. A. van Tiggelen |
| | Title: | Multiple scattering and localization of light |
| | co-advisor: | co-advisor: A. Tip |
| | Date of defense: | September 29, 1992, Amsterda, UvA. |
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| 12 | Defendant: | R. Kroon |
| | Title: | Picosecond spectroscopy on vibrational excitations and excitons in condensed matter |
| | co-advisor: | R. Sprik |
| | Date of defense: | October 27, 1993, Amsterda, UvA. |
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| 13 | Defendant: | P. N. den Outer |
| | Title: | Multiple light scattering in random discrete media. |
| | Date of defense: | May 15, 1995, Amsterda, UvA. |
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| 14 | Defendant: | J. F. de Boer |
| | Title: | Optical fluctuations on the transmission and reflection of mesoscopic systems |
| | Date of defense: | September 20, 1995, Amsterda, UvA. |
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| 15 | Defendant: | M.J.P. Brugmans |
| | Title: | Relaxation kinetics disordered dense phases |
| | Date of defense: | November 16, 1995, Amsterda, UvA. |
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| 16 | Defendant: | D. S. Wiersma |
| | Title: | Light in strongly scattering and amplifying random media |
| | co-advisor: | M.P. van Albada |
| | Date of defense: | November 21, 1995, Amsterdam, UvA |
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| 17 | Defendant: | G. M. Lankhuijzen |
| | Title: | Ionization dynamics of Rydberg atoms in electric fields |
| | co-advisor: | L. D. Noordam |
| | Date of defense: | March 14, 1997, Amsterda, UvA. |

- 18 Defendant: D. V. van Coevorden
Title: Light propagation in ordered and disordered media
co-advisor: co-advisor: A. Tip
Date of defense: May 14, 1997, Amsterdam, UvA.
- 19 Defendant: M. Kroon
Title: Structure and formation of a gel of colloidal discs
co-advisor: co-advisor G. H. Wegdam
Date of defense: September 16 1998, Amsterdam, UvA
- 20 Defendant: H. J. Kop
Title: Time-resolved interferometry on metals and disordered systems
co-advisor: co-advisor R. Sprik
Date of defense: October 20, 1998, Amsterdam, UvA.
- 21 Defendant: S. Woutersen
Title: Femtosecond vibrational dynamics in hydrogen-bonded systems
co-advisor: H. Bakker
Date of defense: June 1, 1999, Amsterdam, UvA.
- 22 Defendant: M. Megens
Title: Structure and fluorescence of photonic colloidal crystals
co-advisor: co-advisor W. L. Vos
Date of defense: November 9, 1999, Amsterdam, UvA.
- 23 Defendant: F. J. P. Schuurmans
Title: Light in complex dielectrics
Date of defense: December 2, 1999, Amsterdam, UvA.
- 24 Defendant: D. O. Riese
Title: Fluid dynamics in charge stabilized colloidal suspensions
co-advisor: G. H. Wegdam
Date of defense: December 4, 2000, Amsterdam, UvA
- 25 Defendant: G. van Soest
Title: Experiments on random lasers
Date of defense: December 4, 2001, Amsterdam, UvA.
- 26 Defendant: J. Gómez Rivas

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| | Title: | Light in strongly scattering semiconductors; diffuse transport and Anderson localization |
| | co-advisor: | R. Sprik |
| | Date of defense: | April 16, 2002, Amsterdam, UvA. |
| 27 | Defendant: | W. V. Meyer |
| | Title: | Volume and interface studies of complex liquid media |
| | co-advisor: | G.H. Wegdam |
| | Date of defense: | December 13, 2002, Amsterdam, UvA. |
| 28 | Defendant: | M. Wubs |
| | Title: | Quantum optics and multiple scattering in dielectrics |
| | Date of defense: | June 11, 2003, Amsterdam, UvA. |
| 29 | Defendant: | A. F. Koenderink |
| | Title: | Emission and transport of light in photonic crystals |
| | Date of defense: | June 27, 2003, Amsterdam, UvA. |
| | co-advisor: | W. L. Vos |
| 30 | Defendant: | B. P. J. Bret |
| | Title: | Multiple light scattering in porous gallium phosphide |
| | Date of defense: | July 14, 2005, Enschede, UT. |
| 31 | Defendant: | T. Savels |
| | Title: | Scattering lasers |
| | Date of defense: | February 14, 2007, Amsterdam, UvA. |
| | co-advisor: | A. P. Mosk |
| 32 | Defendant: | K. L. van der Molen |
| | Title: | Experiments on scattering lasers from Mie to random |
| | Date of defense: | April 25, 2007, Enschede, UT. |
| 33 | Defendant: | I. M. Vellekoop |
| | Title: | Controlling the propagation of light in disordered scattering media |
| | Date of defense: | April 24, 2008, Enschede, UT. |
| | co-advisor: | A. P. Mosk |
| 34 | Defendant: | B. C. Kaas |
| | Title: | Multiple scattering of waves in anisotropic random media |

- Date of defense: September 25, 2008, Enschede, UT.
co-advisor: B. A. van Tiggelen
- 35 Defendant: E. G. van Putten
Title: Disorder-Enhanced Imaging with Spatially Controlled Light
Date of defense: October 28, 2011, Enschede, UT.
co-advisor: A. P. Mosk
- 36 Defendant: S. Faez
Title: Universal wave phenomena in multiple scattering media
Date of defense: September 16, 2011, Amsterdam, UvA.
- 37 Defendant: P. S. Scalia
Title: Optical noise and mesoscopic correlations in random media
Date of defense: November 2, 2011, Amsterdam, UvA.
co-advisor: O. L. Muskens
- 38 Defendant: R. G. S. El-Dardiry
Title: Sources and gain in photonic random media
Date of defense: June 20, 2012, Amsterdam, UvA.
- 39 Defendant: B. Gjonaj
Title: Digital plasmonics: from concept to microscopy
Date of defense: July 4, 2012, Amsterdam, UvA.
- 40 Defendant: J. Aulbach
Title: Spatiotemporal control of light in trbid media
Date of defense: September 20, 2013, Enschede, UT.
- 41 Defendant: M.L. Meretska
Title: Taming a white LED
Date of defense: February 23, 2018, Enschede, UT.
Advisors: W.L. Vos. Co-advisor: AL.
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Services to scientific community

Editor

1990 - 2001 Editor Physics Letters A

International conferences

Organizer

Together with Bart van Tiggelen and Diederik Wiersma AL organized the conference "Fifty years of Anderson Localization" in Paris in December 2008. -Speakers included Professors Thouless, Wölfle, John, and Inguscio.

Committee member

AL has been a member of numerous organizations, program committees of conferences, summer-schools and scientific boards (a.o. ETOPIIM, OSA MetaMaterials, GDR/CNRS IMCODE, GDR/CNRS Mesolmage)

National

- Board of the Dutch Physical Society (for 4 years NNV)
- Organizer Spring meeting of the Dutch Physical Society (NNV, 3 times)
- Member overseeing Board Condensed Matter division of the Dutch physics foundation FOM (for 5 years)
- Member of executive board of FOM (most influential position in Dutch physics, for 5 years)
- Organizer of the main Dutch condensed matter meeting of FOM (Veldhoven) (2 times)
- Member (often chairman) of at least six nomination committees for hiring new professors
- Member overseeing board of FOM-Institute for Plasma Physics Rijnhuizen (for 2 years)
- Director Van der Waals-Zeeman Instituut of Univ. of Amsterdam (for 1 year)
- Member of the executive physics council Royal Netherlands Academy of Sciences (KNAW, for 3 years)
- Member of KNAW overseeing board for physics (for 5 years)
- Member of overseeing board of FOM-institute AMOLF (4 years)
- Chairman of Lorentz-medal committee Royal Netherlands Academy of Sciences (2002)
- Member of Lorentz-medal committee Royal Netherlands Academy of Sciences KNAW (2010)
- FWO (Belgian Science Foundation) member evaluation committee (for three years)

Science Survival

Book

On the basis of experiences with junior scientists at the UvA, at UT and at AMOLF, in continuous discussion with the senior group leaders AL has written a book: *Survival Guide for Scientists*, Amsterdam University Press, 2008, 215 pages.

It is a how-to advice on essential topics such as the foundations for writing scientific texts, presenting data and research information, and the writing and reading of collegial e-mails. Each section is organized by a collection of short rules, outlined and numbered in a logical order as self-explanatory pieces of information—allowing the reader the freedom to study any number of them in any desired order. These concrete guidelines, supplemented by an extensive index, makes it a unique book. Over 5000 copies sold

Lectures

As a result of the book AL is regularly asked to give presentations on survival in science. Invitations of this kind included the Rotterdam Eye Hospital reopening, HBO-students in Groningen, Wetsus in Leeuwarden, medical students in Leiden, and "Verslavingszorg" students in Nijmegen.

Outreach

Present[\[edit\]](#)

AL regularly participates in public scientific discussions.

Past

- AL has been until 2004 a bi-weekly columnist for the high-quality Dutch newspaper de Volkskrant for almost 11 years
- In 2005 he was asked to write an essay for the journal Nature, about any subject he wanted. He decided to write a controversial essay, entitled "Pushing for Power" (Nature 438, 429 (2005)), criticizing the macho-culture of natural science.